State Board of Equalization

ECONOMIC PERSPECTIVE

Discussion of Recent Economic Developments
Publication 329

Volume XVIII, Number 4
November 2012

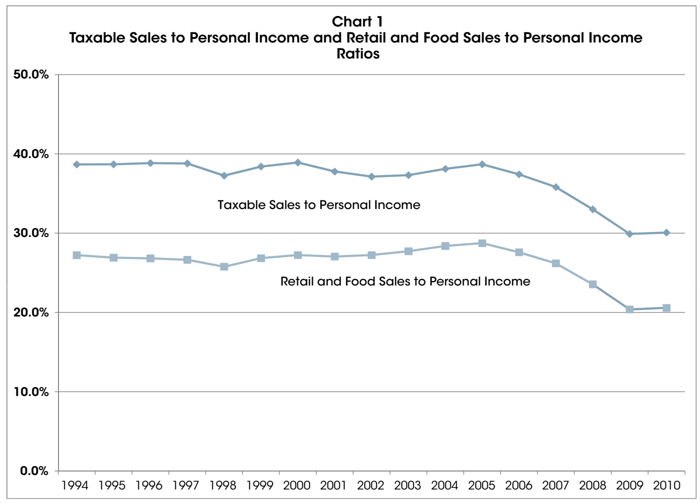
Taxable Sales Closely Related to Personal Income

This edition of the *Economic Perspective* analyses the relationship between taxable sales and personal income. A well-established principle of economics is that consumption and income are strongly correlated to each other. This relationship has important ramifications for taxable sales, which are a major component of total consumption.[1] The relationship between taxable sales and income is also important in analyzing sales tax burdens among households with varying incomes and those in different geographic areas of California.

- After remaining stable for many years, taxable sales to income ratios fell sharply during the "Great Recession," and have yet to recover.
- The California taxable sales to income ratio averaged 30.1 percent for the state as a whole in 2010, and it varied regionally from a high of 37.1 percent for the San Joaquin Valley to a low of 26.5 percent for the San Francisco Bay Area.
- In 2010 personal per capita income varied from a low of 70 percent of the California state average in the San Joaquin Valley to a high of 133 percent of the state average in the San Francisco Bay Area.
- In relation to income, there is more spending on gasoline in the Northern Sacramento Valley and the San Joaquin Valley than any other regions.
- The San Joaquin Valley and Southern California have more spending at fast food restaurants in relation to incomes than any other regions.

California Taxable Sales Ratios

Chart 1 shows the ratio of California total taxable sales to personal income from the mid-1990s to 2010, the latest year for which we have complete data. The chart also shows the ratio of taxable retail and food (restaurant) sales to personal income. Retail and food sales generally do not include taxable sales made to businesses, and therefore provide a clearer picture of taxable sales to income ratios for households.



Ratios Fairly Constant Until 2005

As shown in the chart, annual California taxable sales to income ratios remained fairly constant at levels close to 40 percent of income from the mid-1990s to 2005. The ratio fell slightly for three years during the 2001 recession and its aftermath before rebounding to a level close to the 2000 peak in 2005. The retail and food sales ratio appears to have followed the total taxable sales ratio, both in normal economic times and during recessions, remaining close to ten percent lower.

Lower Ratios Since the "Great Recession"

After 2005 taxable sales to income ratios dropped precipitously, corresponding with the "Great Recession" that began in December 2007. While there are no official start dates for states entering into recessions, the sharp

[1] In California's sales and use tax system, most services are exempt, while most goods are taxable (major goods exemptions include food consumed at home and prescription drugs).

declines in the ratio that began in 2006 provide evidence that California may have entered into a recession well before the country as a whole did. By 2010 the taxable sales to income ratio appeared to have bottomed out at about 30 percent of income, far below the levels seen prior to the recession. The data for the most recent years do not indicate much evidence of the ratio rising back to its pre-recession levels. However, if history is any guide to us, it seems likely that the ratio will rise somewhat as the economy continues to recover from the recession.

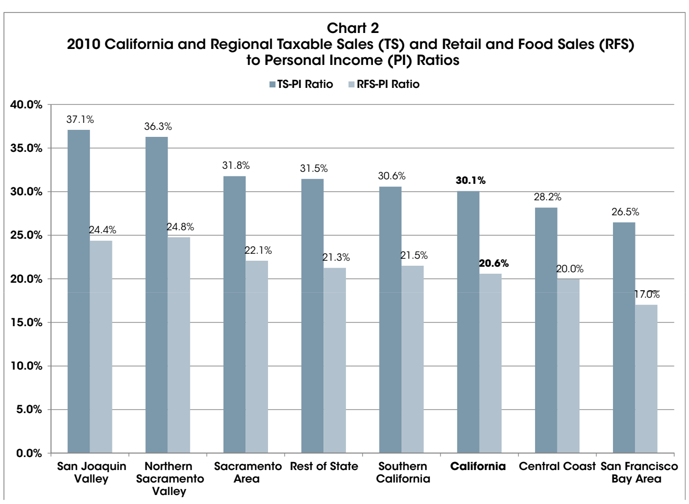
There are other possible reasons for the long-term decline in the taxable sales to income ratios in addition to the recession. These include the long-term trend towards consumers purchasing proportionately more services and fewer goods, the generally rising prices of services compared to goods, and increased shopping over the Internet as a substitute for shopping at physical stores.

2010 Regional Taxable Sales Ratios

The Board of Equalization maintains taxable sales data for counties, and the U.S. Bureau of Economic Analysis publishes personal income data for counties. With these data, we calculated the total taxable sales to income ratios and retail and food taxable sales to income ratios for counties and major regions of California for 2010.

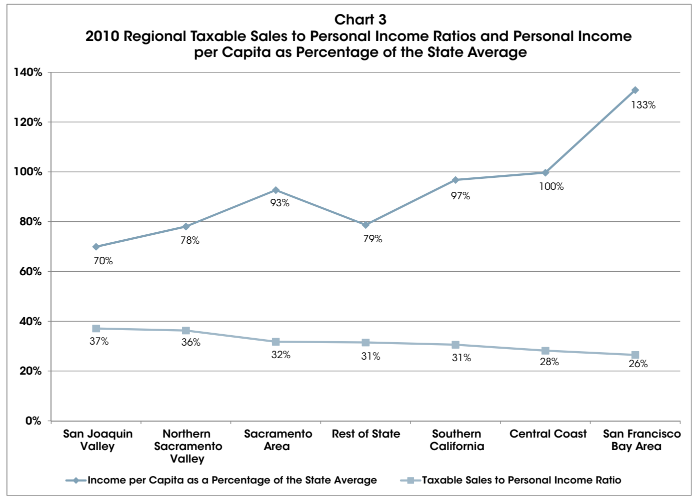
Regional Variability in Ratios

Chart 2 shows both ratios for regions of California, with the regions sorted (from highest to lowest) by the total taxable sales to income ratio. As shown in the chart, while the taxable sales to income ratio averaged 30.1 percent for the state as a whole in 2010, by region it varied from a high of 37.1 percent for the San Joaquin Valley to a low of 26.5 percent for the San Francisco Bay Area. The retail and food taxable sales to income ratio showed a similar pattern, and was an average of about 10 percent lower than the ratio for total taxable sales to income in each region.



Personal Income and the Ratios

A major reason associated with the differences in taxable sales to income ratios by region is income. Chart 3 shows taxable sales to income ratios by region (the same data as in Chart 2) along with the percentage of per capita personal income of the state average for each region for 2010.

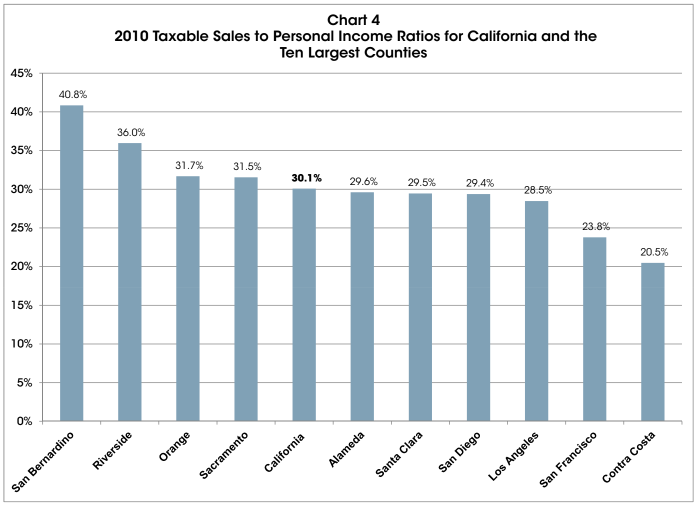


Higher Income, Lower Ratios

Per capita income in the San Joaquin Valley averaged 70 percent of California per capita income in 2010, the lowest percentage of all regions. At the other extreme, per capita income of San Francisco Bay Area residents averaged 133 percent of the state average. As shown in Chart 3 there is a general trend (not always followed by every region) that as per capita incomes were above the state average, taxable sales to income ratios were below the state average. The clearest example is the San Francisco Bay Area, where per capita income was 133 percent of the state average, while the taxable sales to income ratio was 26.5 percent (which was well below that state average of 30.1 percent). At the other extreme, the San Joaquin Valley had the lowest per capita income (70 percent of the statewide average) but the highest taxable sales to income ratio of 37.1 percent.

Ratios in the Top Ten Counties

Chart 4 shows the taxable sales to income ratios for the top ten counties in taxable sales in 2010. These ten counties accounted for 74 percent of total taxable sales in 2010. The taxable sales to income ratios ranged from a high of 40.8 percent for San Bernardino County to a low of 20.5 percent for Contra Costa County.



Spending Ratios for Types of Retailers

With the data available by county, it is also possible to calculate taxable sales to income ratios for specific types of retail stores. We aggregated the counties to the seven major regions of California shown in charts 2 and 3 and calculated spending to income ratios for all types of retail industries. We calculated up to 57 spending to income ratios for each region, one for each type of retail store for which data are available for each county in the region.[2]

Regional Spending Ratios Similar for Most Types of Retailers

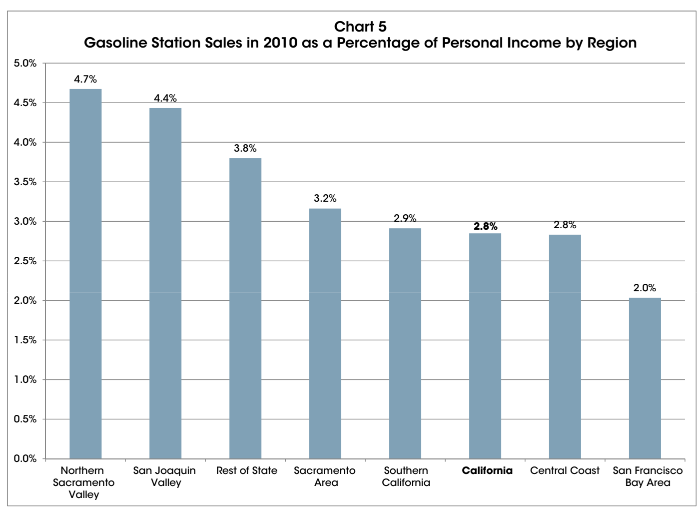
For most kinds of retail stores, the county and regional ratios are similar to the statewide ratios. Consumers in a wide variety of geographic areas generally have similar tastes and preferences for types of goods they purchase and the kinds of stores they buy from. However, there are a couple of notable kinds of retail stores where regional differences among Californians were the most evident, and these will be discussed here.

Some Regional Spending Industries Affected by Travelers

The two retail industries that varied the most by region were gasoline station sales (most of which sell many more products than gasoline) and limited service (fast food) restaurant sales. Interestingly, sales from both of these types of retailers can be strongly affected by purchases made by travelers who may not live in the region. (Income is tabulated by county of residence, whereas taxable sales by region are unaffected by the residence of the buyer.) Relatively high spending to income ratios for gasoline and fast food meals purchased by travelers outside the region are especially likely for the Sacramento and San Joaquin Valley regions, where Interstate 5 is a major corridor, and many sales are made to nonresidents who live and earn their income elsewhere.

Regional Gasoline Spending to Income Ratios

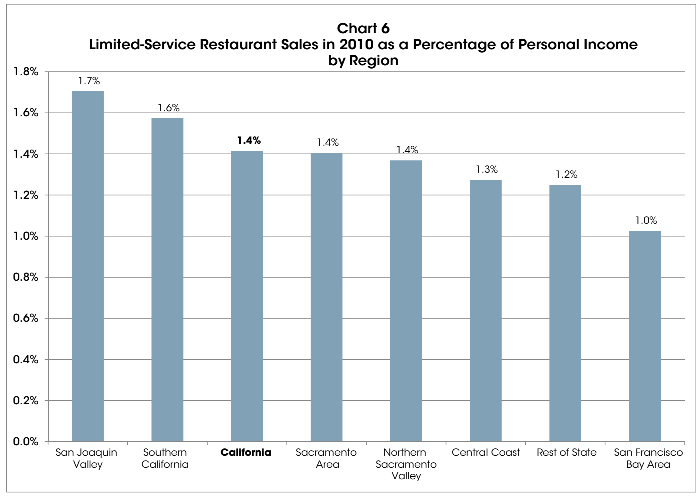
Gasoline station sales averaged 2.8 percent of income for California as a whole. However, as shown in Chart 5, gasoline station sales averaged 4.7 percent for the Northern Sacramento Valley, the highest of any region. The lowest spending region for gasoline stations was the San Francisco Bay Area, with an average of 2.0 percent of income. The San Francisco Bay Area has the best developed set of mass transit systems compared to any other region, which is a major reason for the low ratio. Another factor that appears to be associated with gasoline station sales is income. Recall from Chart 3 that the San Francisco Bay Area had much higher per capita income than any other region, 33 percent higher. The general trend is that the regions with the larger percentages of gas station sales to income had the lower percentages of average per capita income.



[2] Because of confidentiality restrictions, data are not available for all 57 retail industries for all counties, especially some of the smaller counties.

Regional Fast Food Spending to Income Ratios

A similar pattern holds for limited service restaurants: as income goes up, sales generally are lower as a percentage of income. This is evident in Chart 6. The San Joaquin Valley and Southern California regions both have lower than average percentages of per capita income (see Chart 3), and they both have higher than average spending on limited service restaurant meals. The San Francisco Bay Area (with the highest per capita income) has the smallest percentage of income spent at limited service restaurants. Exceptions to this general rule are found in both the Northern Sacramento Valley and the "Rest of State" regions. These are both rural areas with relatively low per capita incomes, yet their spending at limited service restaurants is average or below. A lack of opportunities to make such purchases in these rural areas may limit spending at limited service restaurants.



Contact Us

Please contact us if you would like to be added to our mailing list or have questions or comments.

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Taxpayers' Rights Advocate: 1-888-324-2798

To contact your Board Member, see
www.boe.ca.gov/members/board.htm

Online Resources

For more information about topics covered in this publication and previous issues, please visit any of the websites listed below.

California Department of Finance
www.dof.ca.gov

California Employment Development Department (EDD), *Labor Market Conditions in California*
www.labormarketinfo.edd.ca.gov

Federal Reserve Bank of Philadelphia, *Survey of Professional Forecasters*
www.phil.frb.org/econ/spf/index.html

National Association for Business Economists
www.nabe.com

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